

SANITARY SYSTEMS NEW INSTALLATION/CLOSURE PLAN

BETHPAGE STATE PARK



INTERAGENCY TRANSMISSION

Prepared For:

New York State Office of Parks, Recreation and Historic Preservation
Long Island Region
Belmont Lake State Park

Submitted to:

EPA Region 2
Ground Water Compliance Section
290 Broadway, 20th Floor
New York, NY 10007-1866

Prepared By:

Cashin Associates, P.C.
1200 Veterans Memorial Highway
Hauppauge, NY 11788

August 2016

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Bethpage State Park

New Installation/Closure Plan for Class V Underground Injection Wells

Location: Bethpage State Park
99 Quaker Meeting House Road
Farmingdale, NY 11735

Contact Person: Scott Fish, P.E.
Capital Facilities Regional Manager
New York State Office of Parks, Recreation and Historic Preservation
Long Island Region
Belmont Lake State Park
P.O. Box 247
Babylon, NY 11702-0247
631-321-3533

DESCRIPTION OF PARK

Bethpage State Park is a 1,476-acre park best known for its five world-class golf courses, including the world-renowned Black Course. Visitors also use the park for its picnic facilities, playing fields, tennis courts, bridle paths, hiking and biking trails, and cross-country skiing trails. Bethpage State Park houses a restaurant and catering facilities, a Golf Pro Shop, maintenance facilities, driving range, and comfort and showering facilities. The park has 17 outfalls which includes a combination of septic tanks, small capacity cesspools, and outfalls that are connected to the adjacent municipal sewer district (Nassau County). The park has approximately 370,000 visitors each year.

DESCRIPTION OF WORK

Attachment 1 is a spreadsheet showing both the new work and planned injection well closure at Bethpage State Park. The New York State Office of Parks, Recreation & Historic Preservation plans to upgrade all large capacity and non-large capacity cesspools to sanitary systems with appropriately-sized septic tanks and leaching areas, explore the connection of some on-site systems to the adjacent sewer system, and decommission and close sanitary systems no longer in use.

PROCEDURES PURSUANT TO EPA REGION 2

A. Site Schematic

A site plan is attached (Attachment 2) showing all buildings on the site and all sanitary outfalls. A description of the work planned at each outfall is found in Attachment 1. The plans and specifications associated with the new installation and decommissioning of the well/systems no longer needed will be submitted to the New York State, Department of Environmental Conservation (NYSDEC) Region 1 for approval before proceeding with the work. Construction is anticipated to begin in spring of 2017 and be completed in the winter of 2018.

B. Description of Business

Bethpage State Park is one of the State's most active parks, providing golf facilities, picnic facilities, playing fields, tennis courts, bridle paths, hiking and biking trails and cross country skiing trails.

C. Description of Fluids Injected

The on-site systems treat only sanitary human waste. No known drains which could permit chemicals or industrial waste to enter the sanitary waste are connected to these systems.

D. Connection Between Drains and Injection Wells

The engineering firm of Cashin Associates, P.C. (CA) 1200 Veteran's Memorial Highway, Hauppauge, NY 11788, assisted by a utility mark out company, and verified connection of all drains to the subject injection wells. They utilized visual inspection, dye tests and ground penetrating radar to determine drain locations.

E. Description of Permanent Closure

Attachment 3 is a detailed specification for closure of injection wells associated with the on-site sanitary systems.

F. Contaminant Removal

While we do not expect to encounter hazardous waste/soils based on our investigations, if they are encountered all waste/contaminated soils will be removed from in and around the cesspools until visibly clean soil is reached. Removal will be by excavation. Disposal of the waste will follow the requirements of 6 NYCRR Part 360. Note that Attachment 5, Section 021500 of the specification requires both visual inspection and the use of a PID hand-held VOC monitor at each injection well. Liquid wastes will be removed by a Suffolk County licensed hauler and disposed at a licensed scavenger waste facility.

G. On-site Storage of Excavated Material

On-site storage of material found to be hazardous will be in tarp covered roll off containers until disposal.

H. Waste characterization

We reference section II – A.1 of USEPA Region 2 UIC Program Instructions, “Large capacity cesspools that have received only sanitary waste”. From the Region 2 Instructions, which discuss well specific sampling requirements, “Large Capacity” means serves or designed to serve 20 or more people per day. The cesspools must be pumped out and the wastes must be disposed of properly by a licensed hauler. Excavation, end-point sampling and analysis are typically not required. The waste/fluids that entered the Class V wells previously were untreated sanitary waste containing human excreta. Thus no testing will be conducted, other than visual inspection and use of a hand-held VOC monitor.

I. Backfill

Sites will be backfilled with clean inert sand.

J. Final Report

A Final Remediation/ Closure Report will be issued upon completion of the construction project closing the subject class V wells. In addition updated EPA Inventory Forms will be submitted based on as-built drawings of the construction. Construction is expected to be completed in the winter of 2018. The reports will be sent to:

Chief
Ground Water Compliance Section
U.S. Environmental Protection Agency
290 Broadway, 20th Floor
New York, NY 10007-1866

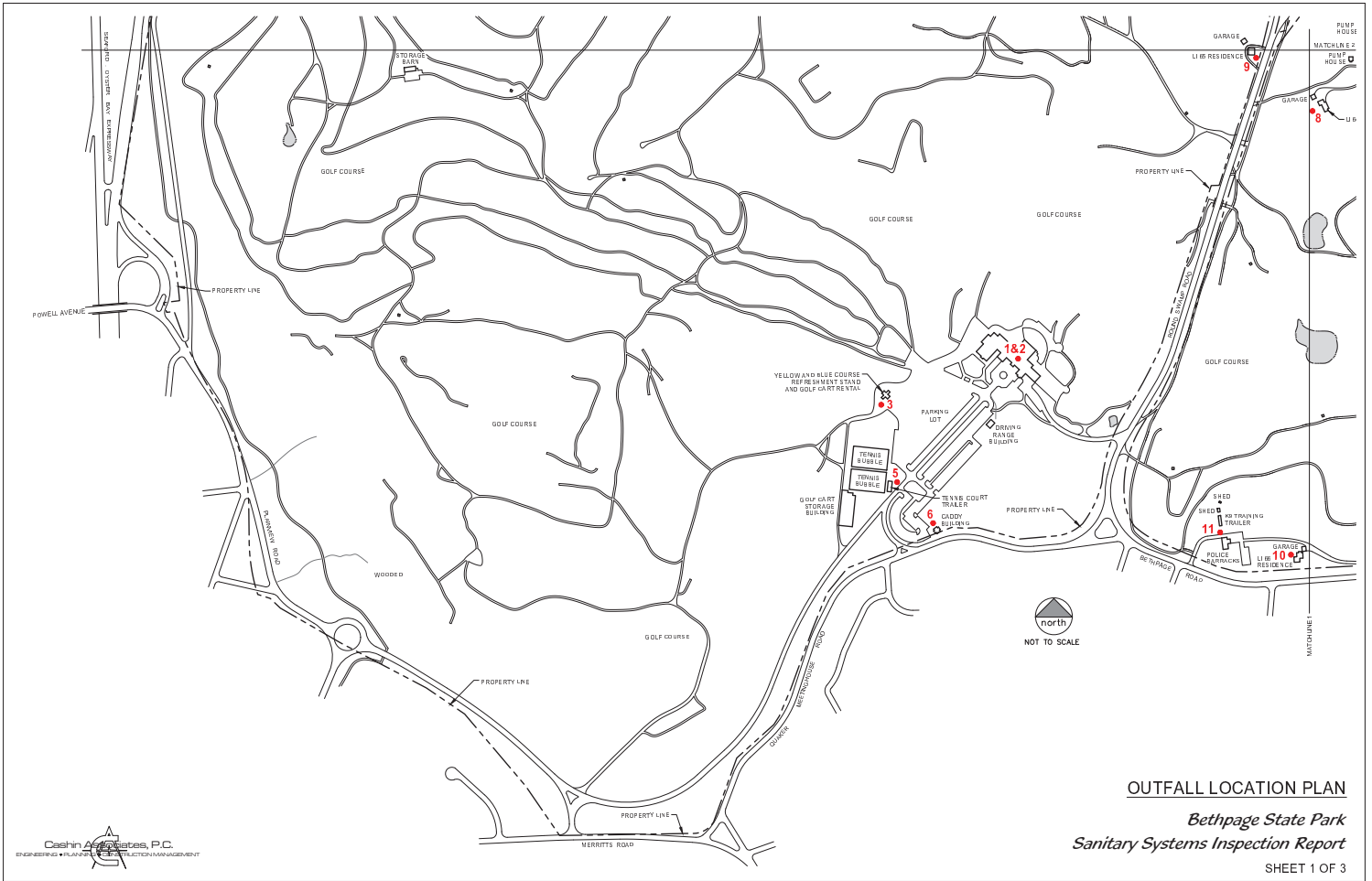
Attachment 1

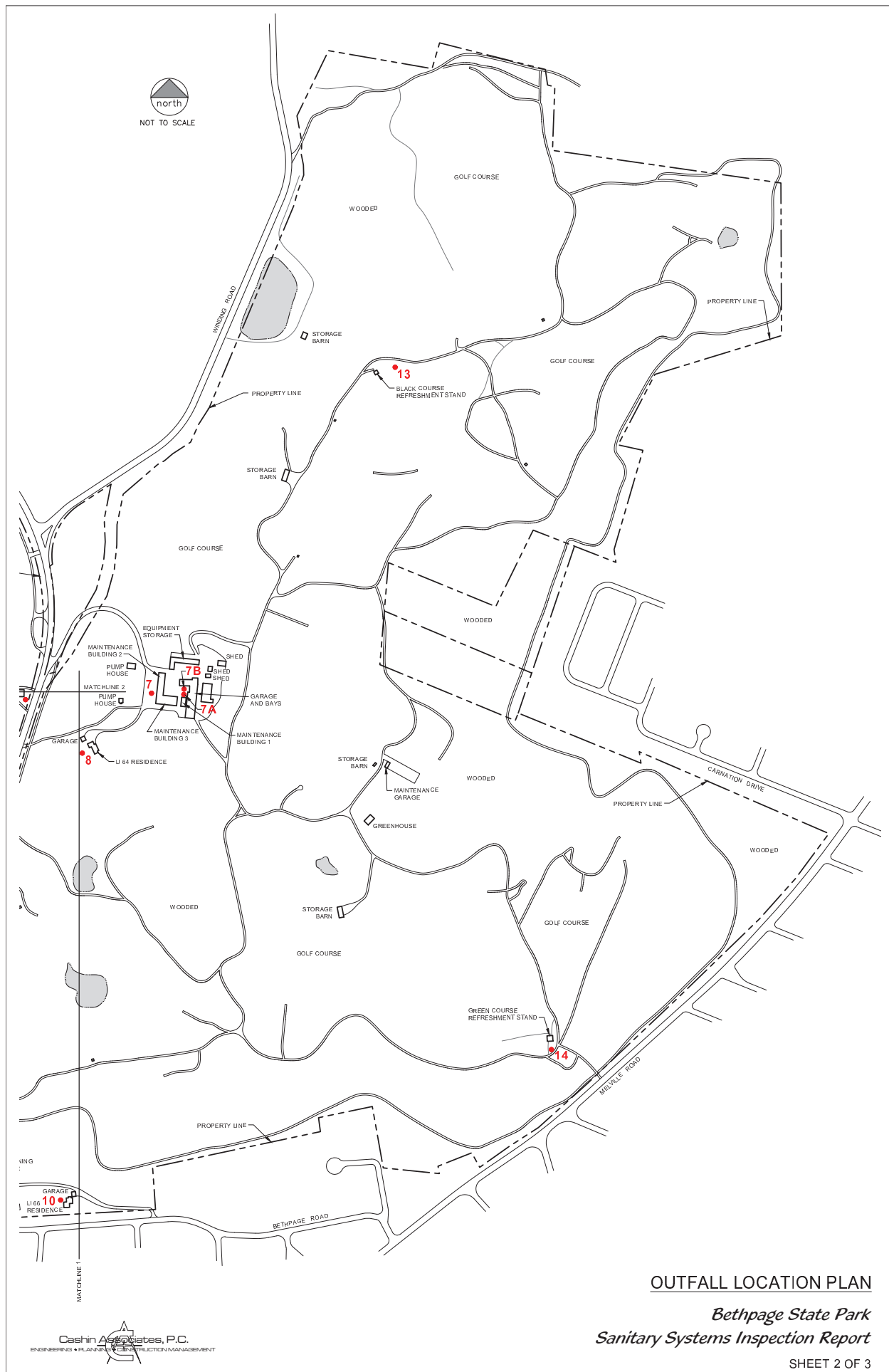
WORK PLAN

Beltpage State Park - Design Basis / Work Summary & SPDES Inventory											8/29/2016
Original Outfall #	New SPDES #	Location	Original SPDES Design Flow Gallons/ Day	New SPDES Design Flow Gallons/ Day	Flow Basis	Septic Tank	Grease Trap	Pump Station	Leaching Area	Leaching Configuration	Comments
1		Clubhouse	Sewer	N/A							
2		Clubhouse	Sewer	N/A							
3**	001*	Yellow & Blue Course Refreshment Stand/Golf Cart Rental	1,800	1,800	Current SPDES	3,750 Gal 12' dia. x 5' eff.			300 sf		Remove or abandon cesspool. Install septic tank and leaching area or connect to sewer if practicable.
4	002	Picnic Area	3,870	3,870	Current SPDES	Existing			Existing		No Changes. LP's to grade.
5	003	Polo Field	0	600	~40 spaces @ 15 gpd/space 40x15 = 600	Existing			Existing		No Changes. LP's to grade.
6		Caddy Building	Sewer	N/A							
7	004*	Maintenance Building West	2,520	1,000	Based on size of existing septic tank (2000 gal)	Existing			Existing		No Changes. LP's to grade or connect to sewer if practicable.
7A**	005*	Maintenance Building East	2,070	720	Industrial space @ 0.04 gpd/sf ~18,000 sf x .04 = 720	1,500 Gal 8' dia. x 5' eff.			480 sf		Remove precast cesspool. Add 1,500 gal. septic tank and 480 sf leaching area or connect to sewer if practicable.
7B	*	Maintenance / Lunch Room Building	90	N/A	Included in above						Disconnect from dry well. Connect to new outfall 005 or connect to sewer if practicable.
8	006*	Residence LI-64	300	300	300 gpd - Single Family Residence	1,200 Gal 8' dia. x 4' eff.			300 sf		Abandon/remove precast cesspool. Install 1,200 gal septic tank and 300 sf leaching area or connect to sewer if practicable.
9		Residence LI-65	Sewer	N/A							
10		Residence LI-66	Sewer	N/A							
11	007*	Police Barracks / Nassau County K-9 Training Trailer	2,160	120	Office Space @ 0.06 gpd/sf ~2,000 sf x .06 = 120	Existing			Existing		No Changes. LP's to grade or connect to sewer if practicable.
12**	008	Red Course Refreshment Stand	1,350	1,350	Current SPDES	3,000 Gal 10' dia. x 6' eff.			900 sf		Abandon/remove cesspool. Install new 3,000 septic tank and 900 sf leaching area.
13**	009	Black Course Refreshment Stand	1350	1,350	Current SPDES	3,000 Gal 10' dia. x 6' eff.			900 sf		Abandon/remove cesspool. Install new 3,000 septic tank and 900 sf leaching area.
14**	010	Green Course Refreshment Stand	1350	1,350	Current SPDES	3,000 Gal 10' dia. x 6' eff.			900 sf		Abandon/remove cesspool. Install new 3,000 septic tank and 900 sf leaching area.
15		Tennis Court Trailer	Sewer	N/A							
	* To Be Connected to Sewer if Practicable										
** Large Capacity Cesspools											

Attachment 2

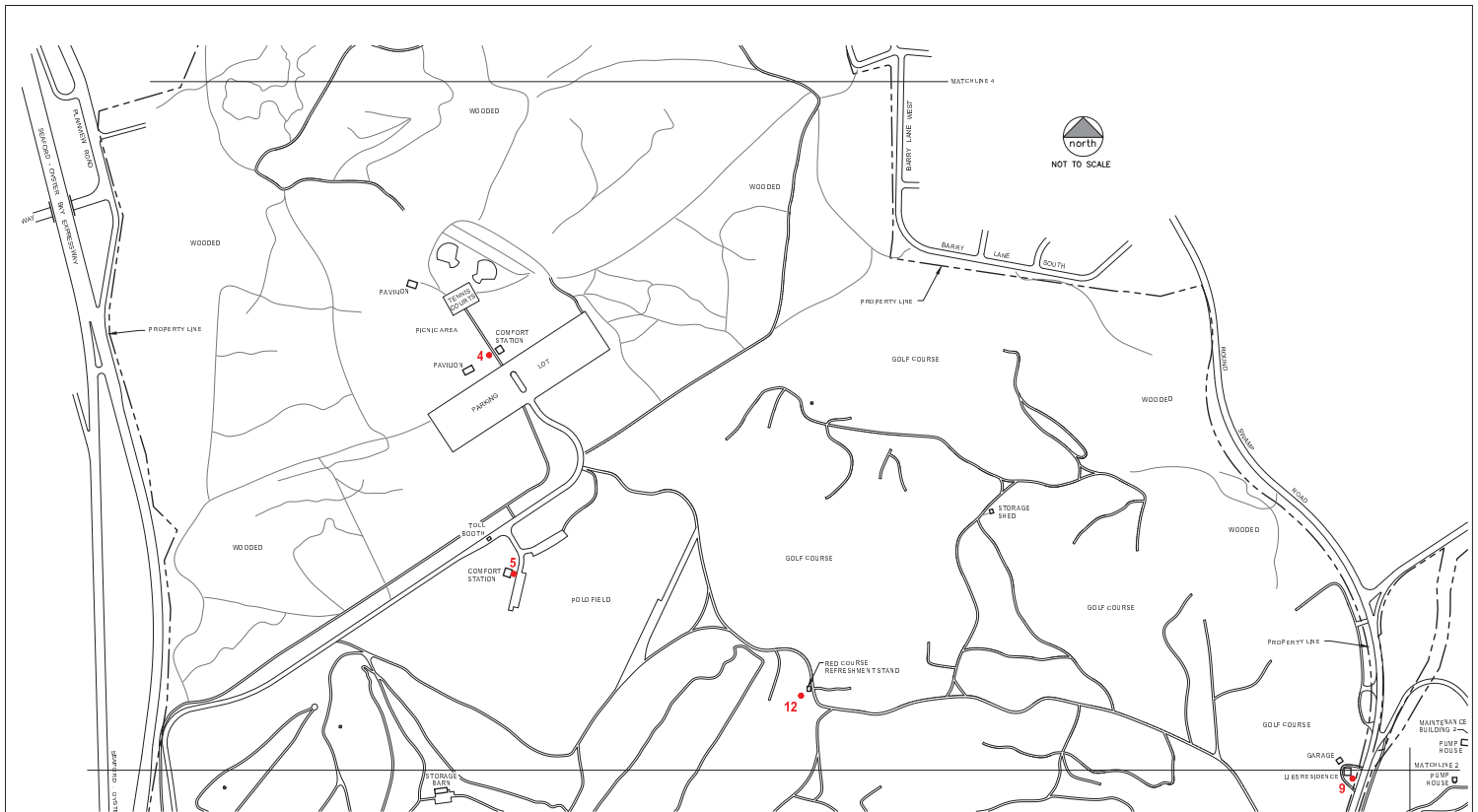
SITE PLAN OUTFALL LOCATIONS





OUTFALL LOCATION PLAN

Bethpage State Park
Sanitary Systems Inspection Report



OUTFALL LOCATION PLAN

Bethpage State Park
Sanitary Systems Inspection Report

SHEET 3 OF 3

Attachment 3

UNDERGROUND INJECTION CONTROL STRUCTURE CLOSURE SPECIFICATIONS

SECTION 021500
UNDERGROUND INJECTION CONTROL STRUCTURE CLOSURE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope of Work:

1. The Contractor shall furnish all labor, materials, supplies, equipment, power, facilities and incidentals necessary to properly close existing underground injection control (UIC) structures located throughout the site, as shown on the Drawings. Work includes, but is not limited to, removal and disposal of standing liquids within the structures, removal of sludge and soil from the bottom of the structures, collection and analysis of endpoint sample(s) from the bottom of the structures, and backfilling and sealing the structures.
2. Closure of the Underground Injection Control (UIC) structures must be conducted in accordance with all applicable federal, state and local regulations with sampling only where directed by the Engineer, or as indicated on the drawings, and the approved UIC Closure Plan, as provided by the Owner.
3. The work shall include removal of all materials regardless of type, character, composition, weight, size or condition.
4. All waste generated during completion of the Work shall be managed in accordance with Section 021300, Waste Transportation and Disposal, and all applicable federal, state and local regulations.
5. The Work shall include all temporary means to manage and control storm water discharge, and prevent siltation and sedimentation of existing storm water management systems during the performance of the Work.
6. The Contractor shall examine the areas and conditions under which Work shall be performed. The Contractor shall correct all conditions detrimental to proper and timely completion of the Work and shall not proceed until unsatisfactory conditions have been corrected. The Contractor shall immediately notify the Owner of any perceived differences in existing conditions which may impact the Work.
7. At all times during closure activities, the Contractor shall provide equipment and facilities to remove all generated wash water. The Contractor shall be responsible for excavating and backfilling, in accordance with these Specifications, any soil contaminated due to improper containment of wash water at no additional expense to the Owner.

8. Contractor shall have a PID hand held VOC Monitor, Mini RAE Lite Model PGM-7300 or equivalent, on site to monitor all open excavations before backfilling.

B. Related Work Specified Elsewhere.

1. Section 026100, "Storage, Handling, Transportation And Disposal Of Petroleum-Contaminated Material And/Or Hazardous Wastes"

1.2 SUBMITTALS

A. UIC Closure Procedures:

1. Contractor shall submit closure procedures to the Engineer for approval. The procedures shall specify all procedures, equipment, materials and manpower which will be utilized to close each respective UIC structure.

1.3 PERMITS AND REGULATIONS

- A. The Contractor shall prepare all required submittals and obtain all necessary permits and approvals and pay all fees for the Work as required by federal, state and local agencies, including the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA) as applicable.
- B. The Contractor shall perform all Work in strict compliance with all applicable requirements of governing authorities having jurisdiction, including NYSDEC and the USEPA as applicable.
- C. The Contractor is advised that all excavation work shall be in strict compliance with Occupational Safety and Health Administration (OSHA), Title 29, Code of Federal Regulations 1926, Subpart P: Excavation and Industrial Code Rule 23 as established by the New York State Department of Labor.

1.4 MANAGEMENT OF LIQUID WASTE

- A. The Contractor shall be responsible for collecting, managing and disposing of all water and liquid waste present within the UIC structure at the beginning of construction, and any water and liquid waste entering the UIC structure as a result of construction activities. This includes, but is not limited to, water resulting from maintaining excavations, cleaning the UIC structures and any storm water.
- B. At all times during construction, the Contractor shall provide equipment and facilities to remove all water entering excavations from any sources. All excavations shall be kept dry so as not to impede construction or result in damage or loss of integrity of any complete Work.

- C. The Contractor shall provide and maintain pumps, sumps, suction and discharge lines, dikes, berms or other controls as necessary to convey liquids away from the excavations. Control devices shall not be removed until disturbed areas are restored or as approved by the Engineer or the Owner.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION

- A. The Contractor shall notify the Engineer, NYSDEC, and the USEPA at least 5 days prior to any field work related to UIC structure closure.
- B. The Contractor shall give special attention to the buildings and structures that are in close proximity of the Work and shall implement all necessary measures to prevent damage to property. Damage to buildings or structures, not scheduled for demolition shall be repaired at the Contractor's expense.
- C. The Contractor shall completely secure any open UIC structures and excavation at the conclusion of the Work or at the end of the day, whichever is sooner. The cover shall be weather-tight and prevent infiltration of storm water and drainage water, and prevent the release of vapors and odors. The cover shall be positioned to shed precipitation, storm water runoff and drainage water. Open UIC structures and excavations shall be barricaded with safety fencing, signs and other means as required by federal, state and local laws and regulations.
- D. The Contractor shall prevent the release of vapors, odor and dust originating during excavation of the UIC structures, removal of liquid, sediment and soil from the UIC structures, loading materials and any other operations required by this Contract.

3.1 DRY WELL/CESSPOOL CLOSURE

- A. The Contractor shall remove the cover, frame, stack, dome, debris, and soil in the vicinity of the dry well/cesspool to completely expose the top of the dry well/cesspool.
- B. The Contractor shall remove the dome, top slab and/or "stack" of the dry well/cesspool, including the manhole rims and covers, if present, to provide an open excavation which extends from ground surface to the bottom of the dry well/cesspool.
- C. All liquids and sludge shall be removed from the dry well/cesspool to the existing sediment surface and placed immediately into approved liquid waste hauling vehicles for off-site disposal.
- D. Where directed by the Engineer, the interior walls of the dry well/cesspool shall be power washed by the Contractor. The Contractor shall collect, characterize, remove and dispose of all soil, sludge, sediment, debris, wastewater, wash water and residuals from within the dry well/cesspool. In power washing the dry well, the

Contractor shall minimize the generation of wastewater and maximize the capture of the wash water.

- E. Where directed by the Engineer, excavation of the soil beneath the dry well/cesspool shall be accomplished as specified by Section 310000, Earthwork, to the horizontal extent of the inside of the rings of the dry well/cesspool and as approved by the Engineer.
- F. Excavation of any visually stained soil or soil exhibiting elevated PID readings shall be accomplished as specified in Section 310000, Earthwork, as directed by the Engineer. All contaminated soil excavated shall be disposed off-site in accordance with Section 021300, Waste Transportation and Disposal.
- G. The Contractor shall be responsible for all structural support, bracing, shoring, backfilling etc., necessary to prevent damage, to nearby structures scheduled to remain.
- H. The contractor shall either remove the dry well/cesspool structure or abandon it in place as directed on the drawings.
- I. Where directed by the Engineer, an endpoint sample shall be collected from the bottom of the excavation, as specified by Section 016520, Sampling Plan. No backfilling shall take place until approval of the endpoint sampling results by the Owner and, as applicable, the USEPA and NYSDEC. There shall be no claims for changes in Contract Time or Contract Price as a result of the Owner's, Engineer's, USEPA's or NYSDEC's review of endpoint sample results. Should the Contractor backfill the excavation prior to the approval of the endpoint sample results to maintain the integrity of the excavation, such work is at the Contractor's risk. Should additional excavation be required, all such backfill shall be removed and handled, as directed by the Engineer, at no additional cost to the Owner.
- J. Once the Contractor has obtained approval of the endpoint sample results, the dry well/cesspool excavation shall be backfilled. Backfill and compaction shall be completed in accordance with the requirement specified in Section 310000, Earthwork.

3.2 MANHOLE CLOSURE

- A. The Contractor shall remove the cover, frame, stack, dome, debris, and soil in the vicinity of the manhole to completely expose the top of the manhole.
- B. The Contractor shall remove the dome, top slab and/or "stack" of the manhole, including the manhole rims and covers, if present, to provide an open excavation which extends from ground surface to the bottom of the manhole.
- C. All liquids and sludge shall be removed from the manhole and placed immediately into approved liquid waste hauling vehicles for off-site disposal.
- D. For Manholes to be removed, the Contractor shall excavate and completely remove the manhole and associated drainage piping within 3 feet of the structure. Excavation of any visually stained soil or soil exhibiting elevated PID readings shall be accomplished as specified in Section 310000, Earthwork, as directed by the

Engineer. All contaminated soil excavated shall be disposed off-site in accordance with Section 021300, Waste Transportation and Disposal.

- E. The Contractor shall be responsible for all structural support, bracing, shoring, backfilling etc., necessary to prevent damage, to nearby structures scheduled to remain.
- F. Where directed by the Engineer, an endpoint sample shall be collected from the bottom of the excavation, as specified by Section 016520, Sampling Plan. No backfilling shall take place until approval of the endpoint sampling results by the Owner and, as applicable, the USEPA and NYSDEC. There shall be no claims for changes in Contract Time or Contract Price as a result of the Owner's, Engineer's, USEPA's or NYSDEC's review of endpoint sample results. Should the Contractor backfill the excavation prior to the approval of the endpoint sample results to maintain the integrity of the excavation, such work is at the Contractor's risk. Should additional excavation be required, all such backfill shall be removed and handled, as directed by the Engineer, at no additional cost to the Owner.
- G. Once the Contractor has obtained approval of the endpoint sample results, the excavation shall be backfilled unless the structure is to be replaced at the same location. Backfill and compaction shall be completed in accordance with the requirements specified in Section 310000, Earthwork.
- H. For manholes to be abandoned in place, the Contractor shall seal with grout all sewer lines entering or exiting the manhole and shall fracture the bottom of the manhole to expose the soil below. The remaining structure shall be backfilled. Backfill and compaction shall be completed in accordance with the requirements specified in Section 310000, Earthwork.

3.3 SEPTIC SYSTEM CLOSURE

- A. The Contractor shall remove the debris, and soil in the vicinity of the septic system to completely expose the septic tank and associated discharge piping.
- B. The Contractor shall remove the dome, top slab and/or "stack" of the septic tank, including the manhole rims and covers, if present, to provide an open excavation which extends from ground surface to the bottom of the septic tank.
- C. All liquids and sludge shall be removed from the septic tank and placed immediately into approved liquid waste hauling vehicles for off-site disposal.
- D. Where removal is indicated on the drawings or as directed by the Engineer, the Contractor shall excavate and completely remove the septic tank and associated drainage piping. Excavation of any visually stained soil or soil exhibiting elevated PID readings shall be accomplished as specified in Section 31000, Earthwork, as directed by the Engineer. All contaminated soil excavated shall be disposed off-site in accordance with Section 021300, Waste Transportation and Disposal.
- E. The Contractor shall be responsible for all structural support, bracing, shoring, backfilling etc., necessary to prevent damage, to nearby structures scheduled to remain.

- F. The septic tank(s) shall be removed and/or abandoned in place as indicated on the drawings. Where the drawings indicate the tank is to be abandoned in place the bottom slab of the septic tank(s) shall be completely broken-up to allow proper drainage. The septic tank(s) shall be backfilled and compacted in accordance with the requirements specified in Section 310000, Earthwork.
- G. Where directed by the Engineer, an endpoint sample shall be collected from the bottom of the excavation, as specified by Section 016520, Sampling Plan. No backfilling shall take place until approval of the endpoint sampling results by the Owner and, as applicable, the USEPA and NYSDEC. There shall be no claims for changes in Contract Time or Contract Price as a result of the Owner's, Engineer's, USEPA's or NYSDEC's review of endpoint sample results. Should the Contractor backfill the excavation prior to the approval of the endpoint sample results to maintain the integrity of the excavation, such work is at the Contractor's risk. Should additional excavation be required, all such backfill shall be removed and handled, as directed by the Engineer, at no additional cost to the Owner.
- H. Once the Contractor has obtained approval of the endpoint sample results, the excavation shall be backfilled unless the structure is to be replaced at the same location. Backfill and compaction shall be completed in accordance with the requirements specified in Section 310000, Earthwork.

3.4 FLOOR DRAIN / TRENCH DRAIN CLOSURE

- A. The Contractor shall remove all debris and soil in the vicinity of the floor drain to completely expose the extent of the drain.
- B. The Contractor shall remove all floor/trench drain covers.
- C. The Contractor shall prepare floor/trench drain surfaces as required to receive concrete fill.
- D. The Contractor shall fill floor/trench drains with concrete flush with the existing floor. Before filling trench drains any outlet piping shall be capped. Concrete shall be in accordance with Section 033010, "Cast-In-Place Concrete", and Section 036100, "Grouting and Patching."

END OF SECTION